

ANTON'YEVA, N. N.

USSR/Nuclear Physics - Hf Isotopes

Jul/Aug 53

"Emission of Hf<sup>175</sup> and Hf<sup>181</sup>," A. A. Bashilov, N. M. Anton'yeva, B. S. Dzhelepov and A. I. Dolgintseva, Phys Inst, Leningrad State Univ im Zhdanov

Iz Ak Nauk, Ser Fiz, Vol 17, No 4, pp 437-467

Briefly review present knowledge of subject which they consider incomplete. Study emission of radioactive Hf<sup>175</sup> and Hf<sup>181</sup> irradiated by slow neutrons, and describe the schemes of decay of Hf<sup>175</sup> and Hf<sup>181</sup>. Forty-three, references, mostly foreign. Rec 27 Jun 53.

272T46

ANTON'YEVA, R. M.

USSR/Nuclear Physics - Zn Isotope

Jul/Aug 53

"Emission of Zn<sup>65</sup>," A. A. Bashilov, P. M. Anton'yeva,  
D. L. Broder and B. S. Dzhelepov, Phys Inst, Leningrad  
State U im Zhdanov

Iz Ak Nauk, Ser Fiz, Vol 17, No 4, pp 468-485

Briefly review data on radioactive isotope Zn<sup>65</sup>. Ana-  
lyze positron and gamma spectra and decay scheme of Zn<sup>65</sup>.  
Indebted to L. N. Zyryanova. Forty-six, mostly foreign,  
references. Rec 27 Jun 53.

272T47

ANTON'YEVA, N. M.

USSR/Nuclear Physics - Radioactive Jul/Aug 53  
Re186

"Beta Spectrum of Re186," N. M. Anton'yeva,  
A. A. Bashilov, B. S. Dzhelepov and L. S.  
Chervinskaya, Phys Inst, Leningrad State U im  
Zhdanov

Iz Ak Nauk, Ser Fiz, Vol 17, No 4, pp 507-510

Studied emission of Re186 seven days after  
irradiation and elimination of Re188. Re186  
transmutes into Os186 by beta-decay and into  
W186 by electron capture, releasing in both

272F50

cases gamma rays. Half life of Re186 was found to be  
93 hours. Rec 16 Jul 53.

ANTONYEVA, N. M.

USSR/ Nuclear Physics

Card 1/1 Pub. 43 - 2/11

Authors : Bashilov, A. A.; Antonyeva, N. M.; Blinov, M. V.; and Dzhelopov, B. S.

Title : Cs<sup>134</sup> radiation

Periodical : Izv. Akad. SSSR. ser. fiz. 18/1, 43-64, Jan-Feb 1954

Abstract : The  $\beta$ -spectrum and the spectra of conversion electrons and photoelectrons obtained from gamma-rays of a long-life Cs<sup>134</sup> isomer were investigated. The measurements were carried out on several sources of different origin and having different surface densities. The general form of the Cs<sup>134</sup> beta-spectrum obtained with a source having an average surface density is shown in one of the tables. The spectrum of conversion electrons was observed to consist of 14 lines corresponding to eight gamma-conversions. Data regarding the conversion intensities and interpretations of these data are given. In order to determine the relative intensities of gamma-lines the authors investigated the radiation of Cs<sup>134</sup> by observing the photoelectrons emitted from the target. Twenty-nine references: 2-URSS; 21-USA (1934-1952). Tables; graphs.

Institution : The A. A. Zhdanov State University, Physics Institute, Leningrad

Submitted : November 30, 1953

ANTONYEVA, N.M.

USER/ Nuclear Physics .. Spectral analysis

Card 1/1 Pub. 43 - 7/11

Authors : Antonyeva, N. M.; Bashilov, A. A.; Dzhalepov, B. S.; and Orlov, V. I.

Title : The beta-spectrum of P<sup>32</sup>

Periodical : Izv. AN SSSR. ser. fiz. 18/1, 93-94, Jan-Feb 1954

Abstract : The form of the beta-spectrum of the radioactive P<sup>32</sup> isotope, obtained according to the reaction P<sup>31</sup> (n, gamma) P<sup>32</sup>, was investigated by means of a magnetic ketron-spectroscope of high resolving power and by means of a conventional spectrometer with semi-circular focus in a homogeneous magnetic field with resolving power of 1.5%. The results regarding the form of the beta-spectrum are presented by a Curie curve. Data on the semi-decomposition period of the investigated radioactive phosphorous isotope are included. Ten references: 2-USSR and 8-USA (1946-1952). Table; graph.

Institution : The A. A. Zhdanov State University, Physics Institute, Leningrad

Submitted : November 30, 1953

ANTON YEVIA, N M

Determination of the relative probabilities of capture  
and release. A. A. Borodov, S. M. Andreeva and I. I.  
B. V. Pecherskaya (Russian original) (See C.R. 50,  
pp. 10, 319, English translation). See C.R. 50,  
pp. 140-141.

CONFIDENTIAL

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

*Annals of the USSR*

## AUTHORS:

Anton'yeva, N. M., Bashilov, A. A.,  
Dzhelepov, B. S., Preobrazhenskiy, B. K.

48-22-2-4/17

## TITLE:

Spectra of the Conversion Electrons of Gd<sup>151</sup> and Gd<sup>153</sup>  
(Spektry konverzionnykh elektronov Gd<sup>151</sup> i Gd<sup>153</sup>)

## PERIODICAL:

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958:  
Vol. 22, Nr 2, pp. 135-152 (USSR)

## ABSTRACT:

The conversion spectra of some gadolinium isotopes with long periods were investigated here. They were obtained by a long-term irradiation of the tantalum target in a scattered proton-beam with an energy of 660 MeV. First the fraction of rare earths was separated from tantalum according to ordinary chemical methods and then the pure gadolinium fraction which mainly contained neutron-unsaturated isotopes was separated according to the chromatographic method. The active material was collected on a thin aluminum foil. The investigation of the spectrum of conversion electrons was performed by means of the magnetic spectrometer - the ketron of the University of Leningrad (ref. 2) which has a dissolving power of 0,5%. The film at the counter slit permits electrons

Card 1/4

Spectra of the Conversion Electrons of Cd<sup>151</sup> and Cd<sup>153</sup> 48-22-2-4/1?

to pass with an energy of more than 7 keV. The measurements of spectrum were made one month after the termination of the target irradiation and were several times repeated in the course of the following year. It became evident that the slowly changing part of the conversion spectrum belongs to Cd<sup>153</sup> and Cd<sup>151</sup>. Moreover the lines belonging to the gadolinium isotopes with shorter periods, which the authors had become acquainted with in earlier investigations, were observed. At first the spectrum of the conversion electrons of Cd<sup>153</sup> is dealt with here. A survey of the data published on Cd<sup>153</sup> is given. From the comparison of those is concluded that the part of the conversion spectrum investigated here belongs to Cd<sup>153</sup>. It is shown that in the transition with 103,3 keV the ratio K:L = 6,4±0,3 indicates that this transition predominantly belongs to the M 1 - type (perhaps with a small E2-admixture). In the transition with 97,4 keV the magnitude of the ratio K:L = 6,9±0,5 indicates that this transition either belongs to M 1 or E 1. In the 83,6 keV-transition the ratio K:L shows that in this case E 2, possibly with an M 1 - admixture exists. In the 69,8 keV -transition the ratio K:L = 6 ± 1 shows that here most

Card 2/4

Spectra of the Conversion Electrons of Gd<sup>151</sup> and Gd<sup>153</sup>

48-22-2-4/17

probably a mixture of M 1 + M 2 exists. - Regarding the decay-scheme some precise determinations were made here on the intensities of the transitions in the decay

Gd<sup>153</sup> → Eu<sup>153</sup>. It is shown that the intensity of the transition to the ground level amounts to <10%, 1g ft 7,5. The 173 keV - level is excited by an intensity of ~12%, 1 g ft-4,7. The most intensively excited ones are the 103,3 keV - level with an intensity of ~46%, 1g ft-5,9 and the 97,4 keV - level with ~32%, 1g ft-6,2. The first level of rotation of the fundamental band with 84 keV (the lowest of all known Eu<sup>153</sup>-levels) is weakly excited, its intensity amounts to ~6%. Its excitation is most probably connected with the nuclear transmutations to Eu<sup>153</sup>. For an explanation of the obtained 1g ft - values it can be assumed that the spin of Gd<sup>153</sup> is equal to 3/2. In the spectrum of the conversion electrons with an activity of long periods obtained here a great number of other lines remained after the deduction of the Gd<sup>153</sup>-lines. The transition with 21,7 keV observed here is, according to the explanations given here, excited in the decay Gd<sup>151</sup> → Eu<sup>151</sup>. It is shown that

Card 3/4

Spectra of the Conversion Electrons of Gd<sup>151</sup> and Gd<sup>153</sup>

48-22-2-4/17

this transition most probably represents a mixture of M 1 + E 2, as the L<sub>1</sub>-peak is considerably higher than the L<sub>2</sub>-and L<sub>3</sub>-peaks and at the same time L<sub>3</sub>~L<sub>2</sub>. Further transitions are shown and it is stated that by the decay of Gd<sup>151</sup> to Eu<sup>151</sup> and by a Coulomb excitation of the latter mainly different nuclear levels and transmutations are produced. Then the decay-scheme of Gd<sup>151</sup> is given, where two variants are shown. The second variant differs by the fact that here the 155 keV-transition to the ground state of Eu<sup>151</sup> takes place. V. Il'in, L. Kiochkova and L. K. Peker helped with the work. There are 7 figures, 10 tables, and 36 references, 7 of which are Soviet.

## ASSOCIATION:

Fizicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanova (Institute for Physics of the Leningrad State University imeni A. A. Zhdanov)

## AVAILABLE:

Library of Congress

1. Gadolinium Electrons-Conversion spectra
2. Gadolinium isotopes-Irradiation

Card 4/4

## AUTHORS:

Anton'yeva, N. M., Bashilov, A. A., Dzhastepov, B. S., Preobrazhenskiy, B. K. SOV/48-22-8-1/20

## TITLE:

The Spectrum of Conversion Electrons of Gd<sup>149</sup> (Spektr konverzionalnykh elektronov Gd<sup>149</sup>)

## PERIODICAL:

Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958,  
Vol. 22, Nr 8, pp. 895-905 (USSR)

## ABSTRACT:

The radioactive Gd<sup>149</sup> isotope was discovered by Hoff, Rasmussen and Thomson in 1951 (Ref 3), who observed the nuclear reactions of Sm<sup>147</sup>( $\alpha$ , 2n)Gd<sup>149</sup> and Eu<sup>151</sup>(p, 3n)Gd<sup>149</sup>. In later years it was found (Ref 4) that Gd<sup>149</sup> is transformed into Eu<sup>149</sup> by electron capture (>99%) with a half life of 9±1 days and into Sm<sup>145</sup> (~10<sup>-3</sup>%) by alpha-particle emission with an energy of 3 MeV. The spectra of conversion of electrons and those of  $\gamma$ -rays had previously not been investigated. The basic experimental data were supplied by the authors at the 7<sup>th</sup> All-Union Conference of Nuclear Spectroscopy in January 1957. The present paper contains data concerning

Card 1/4

The Spectrum of Conversion Electrons of Gd<sup>149</sup>

SOV/48-22-8.1/20

Gd<sup>149</sup>, which were published in 1957 (Refs 6-8), as well as results of investigations carried out by the authors. The transition processes attributed by the authors to Gd<sup>149</sup> are given in table 1. Conversion lines K-149,8 and L-149,8 are to be seen in figure 1 only. The lines between the intervals 220-360 and 400-550 keV are also shown in figures 3 and 4. They concern a later moment at which the short-lived Gd<sup>147</sup> isotope ( $T_{1/2} = 35$  hours) had already decayed. Long-lived Gd<sup>151</sup> and Gd<sup>153</sup> isotopes in these intervals result in lines K-243, K-306, K-350 etc., which show low intensity in the case of short irradiation and can not be distinguished at such a scale as in figure 3. The values K:L mentioned in table 1 are, according to available data, the arithmetical mean of about 10 series of measurements. "urin et al. (Refs 6 and 7) state that by means of the scintillation counter they observed  $\gamma$ -rays of Gd<sup>149</sup> with the following energies:  $E_\gamma = 150, 300, 347$  and 520 keV. Recently the paper by Hasmussen and his collaborators has been published (Ref 8) by which the

Card 2/1

The Spectrum of Conversion Electrons of Gd<sup>149</sup>

30V/13-22-8-17

radiation of Gd<sup>149</sup> was investigated. For reasons of comparison data are given of that paper for powerful conversion lines in table 1. The two results agree well (up to 149,8 keV). In addition, some faint lines were attributed to the

Gd<sup>149</sup> isotope in the paper mentioned. The identification of these lines, however, is not quite reliable. The data obtained from the spectrum of the conversion electrons of

Gd<sup>149</sup> permit some conclusions concerning the types (multipole order) of the nuclear transition in Eu<sup>149</sup>. For this reason the results of measurements (table 2) are compared with the computed ones. The scheme of the decay of

Gd<sup>149</sup> → Eu<sup>149</sup> suggested here is shown by figure 5. The energy of decay is computed by Levi on the basis of the empirical formula for atomic masses, see reference 11. In view of the fact that the nuclei <sup>64</sup>Gd<sup>149</sup> and <sup>63</sup>Eu<sup>149</sup> have less than 88

neutrons, it must be concluded that they belong to the category of the spherical ones as described by Mayer's model.

Card 3/4

The Spectrum of Conversion Electrons of  $\text{Cd}^{149}$

SOV/48-22-8-1/22

The authors thank the head of the laboratory for nuclear problems OIYAI V.P. Dzhelepov and the staff of the synchrocyclotron and they also express their gratitude to A.N. Murin, G.M. Gorodinskiy, V.N. Pokrovskiy, V.A. Sergiyenko, L.A. Sliv and I.M. Band.

There are 5 figures, 2 tables, and 11 references, 7 of which are Soviet.

ASSOCIATION:

Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gos. universiteta im. A.A. Zhdanova (Scientific Research Institute of Physics, Leningrad State University imeni A. A. Zhdanov)

Card 4/4

AUTHORS: Anton'yava, N. N., Bashilov, A. A., Dzhelepov, B. S., Preobrazhenskiy B. K. S0V/48-22-8-2/20

TITLE: Conversion Electron Spectra of Gd<sup>147</sup> and Eu<sup>147</sup> (Spektry konversionnykh elektronov Gd<sup>147</sup> i Eu<sup>147</sup>)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 8, pp. 906 - 910 (USSR)

ABSTRACT: This is a study of the spectra of the conversion electrons of Gd<sup>147</sup> and of its decay product Eu<sup>147</sup> under the same experimental conditions as in the study of Gd<sup>149</sup> (Ref 1). The basic experimental results were communicated at the 7th All Union Conference of Nuclear Spectroscopy in January 1957 (Ref 2). First the summary spectrum of the gadolinium fraction was investigated, this spectrum is comprising lines from several isotopes. It can be concluded, that the Gd isotope with a half-life of  $T_{1/2} = 35 \pm 1$  hours transmutes into a radioactive Eu isotope. This by means of an electron capture with a half life of  $T_{1/2} = 25 \pm 1$  days again transmutes into Sm entailing nuclear transitions with energies of 120 and 200 keV. Control experiments were conducted

Card 1,4

Conversion Electron Spectra of Gd<sup>147</sup> and Eu<sup>147</sup>

SCV/48-22-8-2/20

with europium separated chromatographically from gadolinium. According to informations available in publications (Ref 3) the activity of europium with a half life of 24 days which is accompanied by a  $\gamma$ -radiation with 120 and 200 keV originates from the isotope Eu<sup>147</sup>. Hence the Gd isotope decaying with a half-life of  $35 \pm 1$  hours is considered to be Gd<sup>147</sup>. The overall spectrum of the conversion electrons of the gadolinium fraction in the energy range below 500 keV is presented in the previous paper (Ref 1, Fig 1). In this paper a section of the spectrum below 400 keV is presented with the exclusion of the other isotopes of Gd and Eu (Fig 3). The section of the spectrum between  $\sim 400$  keV and  $\sim 1,5$  MeV is given in figure 4. The evidence collected and some supplementary data permit to draw conclusions concerning the multipole order of the transitions to the ground state in Eu<sup>147</sup>. Experimental values of K/L,  $\alpha$  and of other quantities are compared with theoretical values in table 2. Energy relations between the transitions and a rough estimation of their intensities suggest a decay scheme as given in figure 5. The total picture of the Eu<sup>147</sup> conversion electron spectrum is given in figure 7. The decay scheme Eu<sup>147</sup>  $\rightarrow$  Sm<sup>147</sup> was

Card 2/4

Conversion Electron Spectra of Gd<sup>147</sup> and Eu<sup>147</sup>

SOV/48-22-8-2/20

recently subjected to a closer investigation (Ref 9), by which this scheme was supplemented by the transitions 76,5, 600, 676 and 800 keV (Fig 3). The decay energy was computed on the basis of the empiric formula for atomic masses by Levy (Ref 8). The intensity data on nuclear transitions permit to compute approximately the relative probabilities of electron capture in Eu<sup>147</sup> leading to different levels of Sm<sup>147</sup>. In order to determine the probability of the capture leading to the normal state of Sm<sup>147</sup> it would be necessary to know the total number of Auger (Azhe) electrons. As the authors, however, had no preparations of pure Eu<sup>147</sup> at their disposal, the values used in the computation of the relative probabilities of the decay of Eu<sup>147</sup> to different levels were taken from reference 9. The authors express their gratitude to the Director of the Laboratory of Nuclear Problems OIYAI V.P.Dzhelepov and to the synchrocyclotron staff as well as to A.N.Murin, G.M.Gorodinskiy, V.N.Pokrovskiy, V.A.Sergiyenko and L.A.Sliv and I.M.Band. There are 8 figures, 4 tables, and 12 references, 9 of which are Soviet.

Card 3/4

Conversion Electron of Gd<sup>147</sup> and Eu<sup>147</sup>

SOV/48-22-8-2/2o

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo  
gos.universiteta im.A.A.Zhdanova (Scientific Research Institute  
of Physics at the Leningrad State University imeni A.A.Zhdanov)

Card 4/4

**AUTHORS:**

N M  
Anton'yeva, M. M., Bashilov, A. A., 20-119-2-12/60  
Dzhelepov, B. S., Corresponding Member of the  
AS USSR, Preobrazhenskiy, B. K.

**TITLE:**

Conversion Spectra of Some Neutron-Deficient Terbium  
Isotopes (Konversionnyye spektry nekotorykh  
neutronodefitsitnykh izotopov Tb)

**PERIODICAL:**

Doklady Akademii Nauk SSSR, 1958, Vol 119, Nr 2,  
pp 241-243 (USSR)

**ABSTRACT:**

The present paper investigates the conversion spectra  
of the neutron-deficient Tb-isotopes resulting in the  
reaction Ta + P (660 MeV). The preparations and the  
conditions of experiments are similar to those in 2  
previous works (references 1, 2). The decay curves  
determined from the change of the conversion per's  
with progressing time showed that the Tb-preparation  
contains several isotopes. The present paper gives  
the results obtained for each of the observed activities:  
1)  $T_{1/2} = 8 \pm 1$  hours.

Card 1/4

Conversion Spectra of Some Neutron-Deficient Terbium Isotopes 20-119-2-12/60

Only the conversion electrons of the two transitions  $E_{\gamma}$  = 123 and 977 keV were observed. One of the isomers of Tb<sup>154</sup> shows  $T_{1/2} = 7.3$  hours. Furthermore the level 123 keV is known for Gd<sup>154</sup>. Therefore the given activity was attributed to Tb<sup>154</sup>. The other transitions known from the decay of Eu<sup>154</sup> were, however, not observed in Gd<sup>154</sup>. 2)  $T_{1/2} = 18 \pm 1$  hours. Within the energy interval of from 109 to 1050 keV 16 nuclear transitions as well as a composed  $\beta^+$ -spectrum with  $E_{\text{limit}} = 2.8$  MeV were observed. The values of  $E_{\gamma}$  of the here discussed transitions differ from the corresponding values known from the decay of Eu<sup>154</sup>. The 18-hour activity observed here can be attributed to Tb<sup>154</sup> or to Tb<sup>151</sup> partly or completely.

Card 2/4

Conversion Spectra of Some Neutron-Deficient Terbium Isotopes 20-119-2-12/60

3)  $T_{1/2} = 2.3 \pm 0.3$  days. Within the interval of about 100 to 250 keV 8 nuclear transitions were observed. Until now no isotopes have been known which decay with such a half life. The newly discovered activity obviously belongs to Tb<sup>153</sup>. The authors observed in fact Gd<sup>153</sup> in the secondary products of its preparation.

4)  $T_{1/2} = 5 \pm 1$  days. The transitions attributed to the half life of 5 days obviously belong to the isotopes Tb<sup>155</sup> and Tb<sup>156</sup>. The authors attribute 14 transitions to Tb<sup>155</sup>, with respect to their energy they partly correspond to the 19 known transitions. The transition with  $E_\gamma = 89$  and 199 keV were attributed to Tb<sup>156</sup>.

5)  $T_{1/2} = 10; 120$  or 200 days respectively. The activities with these half lives also belong to the secondary products of Gd<sup>149</sup>, Gd<sup>151</sup> and Gd<sup>153</sup>. The authors express their thanks to the Team

Card 3/4

ANTON'IEVA, N.M., Cand Phys Math Sci -- (diss) "Study of ~~the~~,  
radiation of the radioactive isotopes Zn<sup>65</sup>, Ag<sup>110</sup>, and Cs<sup>134</sup>.

Len, 1959, 7 pp (Len Order of Lenin State Univ im A.A. Zhdanov)

150 copies. Bibliography at end of text (10 titles) (KL, 28-59, 122)

三

ANSWER KEY

International Conference on the Biological Basis of Human Behavior, 2d., Geneva, 1953  
Meeting organized by International Institute of Health, Geneva, Switzerland,  
August 1953. Proceedings, Public Report of Service Internationale  
des Organes Internationaux, Geneva, 1953, pp. 20. (Series Due Study, Vol. 1.)

Printed by A.E. Almquist & Son  
Stockholm, Stockholm, Sweden  
and by  
A.C. Thomas and Sons, Springfield, Massachusetts, U.S.A.  
and by  
The Charles Heffer Co., Ltd., Cambridge, England, 1953.

This publication or portions thereof may be reproduced, stored in retrieval systems, or  
transmitted, in whole or in part, by means of microfilm, microfiche, magnetic tape,  
or other electronic or mechanical methods, by facsimile, photocopying, or otherwise,  
without prior permission or express written agreement.

172  
173  
174  
175  
176  
177  
178  
179  
180  
181  
182  
183  
184  
185  
186  
187  
188  
189  
190  
191  
192  
193  
194  
195  
196  
197  
198  
199  
200  
201  
202  
203  
204  
205  
206  
207  
208  
209  
210  
211  
212  
213  
214  
215  
216  
217  
218  
219  
220  
221  
222  
223  
224  
225  
226  
227  
228  
229  
230  
231  
232  
233  
234  
235  
236  
237  
238  
239  
240  
241  
242  
243  
244  
245  
246  
247  
248  
249  
250  
251  
252  
253  
254  
255  
256  
257  
258  
259  
260  
261  
262  
263  
264  
265  
266  
267  
268  
269  
270  
271  
272  
273  
274  
275  
276  
277  
278  
279  
280  
281  
282  
283  
284  
285  
286  
287  
288  
289  
290  
291  
292  
293  
294  
295  
296  
297  
298  
299  
300  
301  
302  
303  
304  
305  
306  
307  
308  
309  
310  
311  
312  
313  
314  
315  
316  
317  
318  
319  
320  
321  
322  
323  
324  
325  
326  
327  
328  
329  
330  
331  
332  
333  
334  
335  
336  
337  
338  
339  
340  
341  
342  
343  
344  
345  
346  
347  
348  
349  
350  
351  
352  
353  
354  
355  
356  
357  
358  
359  
360  
361  
362  
363  
364  
365  
366  
367  
368  
369  
370  
371  
372  
373  
374  
375  
376  
377  
378  
379  
380  
381  
382  
383  
384  
385  
386  
387  
388  
389  
390  
391  
392  
393  
394  
395  
396  
397  
398  
399  
400  
401  
402  
403  
404  
405  
406  
407  
408  
409  
410  
411  
412  
413  
414  
415  
416  
417  
418  
419  
420  
421  
422  
423  
424  
425  
426  
427  
428  
429  
430  
431  
432  
433  
434  
435  
436  
437  
438  
439  
440  
441  
442  
443  
444  
445  
446  
447  
448  
449  
450  
451  
452  
453  
454  
455  
456  
457  
458  
459  
460  
461  
462  
463  
464  
465  
466  
467  
468  
469  
470  
471  
472  
473  
474  
475  
476  
477  
478  
479  
480  
481  
482  
483  
484  
485  
486  
487  
488  
489  
490  
491  
492  
493  
494  
495  
496  
497  
498  
499  
500  
501  
502  
503  
504  
505  
506  
507  
508  
509  
510  
511  
512  
513  
514  
515  
516  
517  
518  
519  
520  
521  
522  
523  
524  
525  
526  
527  
528  
529  
530  
531  
532  
533  
534  
535  
536  
537  
538  
539  
540  
541  
542  
543  
544  
545  
546  
547  
548  
549  
550  
551  
552  
553  
554  
555  
556  
557  
558  
559  
559  
560  
561  
562  
563  
564  
565  
566  
567  
568  
569  
569  
570  
571  
572  
573  
574  
575  
576  
577  
578  
579  
579  
580  
581  
582  
583  
584  
585  
586  
587  
588  
589  
589  
590  
591  
592  
593  
594  
595  
596  
597  
598  
599  
599  
600  
601  
602  
603  
604  
605  
606  
607  
608  
609  
609  
610  
611  
612  
613  
614  
615  
616  
617  
618  
619  
619  
620  
621  
622  
623  
624  
625  
626  
627  
628  
629  
629  
630  
631  
632  
633  
634  
635  
636  
637  
638  
639  
639  
640  
641  
642  
643  
644  
645  
646  
647  
648  
649  
649  
650  
651  
652  
653  
654  
655  
656  
657  
658  
659  
659  
660  
661  
662  
663  
664  
665  
666  
667  
668  
669  
669  
670  
671  
672  
673  
674  
675  
676  
677  
678  
679  
679  
680  
681  
682  
683  
684  
685  
686  
687  
688  
689  
689  
690  
691  
692  
693  
694  
695  
696  
697  
698  
699  
699  
700  
701  
702  
703  
704  
705  
706  
707  
708  
709  
709  
710  
711  
712  
713  
714  
715  
716  
717  
718  
719  
719  
720  
721  
722  
723  
724  
725  
726  
727  
728  
729  
729  
730  
731  
732  
733  
734  
735  
736  
737  
738  
739  
739  
740  
741  
742  
743  
744  
745  
746  
747  
748  
749  
749  
750  
751  
752  
753  
754  
755  
756  
757  
758  
759  
759  
760  
761  
762  
763  
764  
765  
766  
767  
768  
769  
769  
770  
771  
772  
773  
774  
775  
776  
777  
778  
779  
779  
780  
781  
782  
783  
784  
785  
786  
787  
788  
789  
789  
790  
791  
792  
793  
794  
795  
796  
797  
798  
799  
799  
800  
801  
802  
803  
804  
805  
806  
807  
808  
809  
809  
810  
811  
812  
813  
814  
815  
816  
817  
818  
819  
819  
820  
821  
822  
823  
824  
825  
826  
827  
828  
829  
829  
830  
831  
832  
833  
834  
835  
836  
837  
838  
839  
839  
840  
841  
842  
843  
844  
845  
846  
847  
848  
849  
849  
850  
851  
852  
853  
854  
855  
856  
857  
858  
859  
859  
860  
861  
862  
863  
864  
865  
866  
867  
868  
869  
869  
870  
871  
872  
873  
874  
875  
876  
877  
878  
879  
879  
880  
881  
882  
883  
884  
885  
886  
887  
888  
889  
889  
890  
891  
892  
893  
894  
895  
896  
897  
898  
899  
899  
900  
901  
902  
903  
904  
905  
906  
907  
908  
909  
909  
910  
911  
912  
913  
914  
915  
916  
917  
918  
919  
919  
920  
921  
922  
923  
924  
925  
926  
927  
928  
929  
929  
930  
931  
932  
933  
934  
935  
936  
937  
938  
939  
939  
940  
941  
942  
943  
944  
945  
946  
947  
948  
949  
949  
950  
951  
952  
953  
954  
955  
956  
957  
958  
959  
959  
960  
961  
962  
963  
964  
965  
966  
967  
968  
969  
969  
970  
971  
972  
973  
974  
975  
976  
977  
978  
979  
979  
980  
981  
982  
983  
984  
985  
986  
987  
988  
989  
989  
990  
991  
992  
993  
994  
995  
996  
997  
998  
999  
999  
1000  
1001  
1002  
1003  
1004  
1005  
1006  
1007  
1008  
1009  
1009  
1010  
1011  
1012  
1013  
1014  
1015  
1016  
1017  
1018  
1019  
1019  
1020  
1021  
1022  
1023  
1024  
1025  
1026  
1027  
1028  
1029  
1029  
1030  
1031  
1032  
1033  
1034  
1035  
1036  
1037  
1038  
1039  
1039  
1040  
1041  
1042  
1043  
1044  
1045  
1046  
1047  
1048  
1049  
1049  
1050  
1051  
1052  
1053  
1054  
1055  
1056  
1057  
1058  
1059  
1059  
1060  
1061  
1062  
1063  
1064  
1065  
1066  
1067  
1068  
1069  
1069  
1070  
1071  
1072  
1073  
1074  
1075  
1076  
1077  
1078  
1079  
1079  
1080  
1081  
1082  
1083  
1084  
1085  
1086  
1087  
1088  
1089  
1089  
1090  
1091  
1092  
1093  
1094  
1095  
1096  
1097  
1098  
1099  
1099  
1100  
1101  
1102  
1103  
1104  
1105  
1106  
1107  
1108  
1109  
1109  
1110  
1111  
1112  
1113  
1114  
1115  
1116  
1117  
1118  
1119  
1119  
1120  
1121  
1122  
1123  
1124  
1125  
1126  
1127  
1128  
1129  
1129  
1130  
1131  
1132  
1133  
1134  
1135  
1136  
1137  
1138  
1139  
1139  
1140  
1141  
1142  
1143  
1144  
1145  
1146  
1147  
1148  
1149  
1149  
1150  
1151  
1152  
1153  
1154  
1155  
1156  
1157  
1158  
1159  
1159  
1160  
1161  
1162  
1163  
1164  
1165  
1166  
1167  
1168  
1169  
1169  
1170  
1171  
1172  
1173  
1174  
1175  
1176  
1177  
1178  
1179  
1179  
1180  
1181  
1182  
1183  
1184  
1185  
1186  
1187  
1188  
1189  
1189  
1190  
1191  
1192  
1193  
1194  
1195  
1196  
1197  
1198  
1199  
1199  
1200  
1201  
1202  
1203  
1204  
1205  
1206  
1207  
1208  
1209  
1209  
1210  
1211  
1212  
1213  
1214  
1215  
1216  
1217  
1218  
1219  
1219  
1220  
1221  
1222  
1223  
1224  
1225  
1226  
1227  
1228  
1229  
1229  
1230  
1231  
1232  
1233  
1234  
1235  
1236  
1237  
1238  
1239  
1239  
1240  
1241  
1242  
1243  
1244  
1245  
1246  
1247  
1248  
1249  
1249  
1250  
1251  
1252  
1253  
1254  
1255  
1256  
1257  
1258  
1259  
1259  
1260  
1261  
1262  
1263  
1264  
1265  
1266  
1267  
1268  
1269  
1269  
1270  
1271  
1272  
1273  
1274  
1275  
1276  
1277  
1278  
1279  
1279  
1280  
1281  
1282  
1283  
1284  
1285  
1286  
1287  
1288  
1289  
1289  
1290  
1291  
1292  
1293  
1294  
1295  
1296  
1297  
1298  
1299  
1299  
1300  
1301  
1302  
1303  
1304  
1305  
1306  
1307  
1308  
1309  
1309  
1310  
1311  
1312  
1313  
1314  
1315  
1316  
1317  
1318  
1319  
1319  
1320  
1321  
1322  
1323  
1324  
1325  
1326  
1327  
1328  
1329  
1329  
1330  
1331  
1332  
1333  
1334  
1335  
1336  
1337  
1338  
1339  
1339  
1340  
1341  
1342  
1343  
1344  
1345  
1346  
1347  
1348  
1349  
1349  
1350  
1351  
1352  
1353  
1354  
1355  
1356  
1357  
1358  
1359  
1359  
1360  
1361  
1362  
1363  
1364  
1365  
1366  
1367  
1368  
1369  
1369  
1370  
1371  
1372  
1373  
1374  
1375  
1376  
1377  
1378  
1379  
1379  
1380  
1381  
1382  
1383  
1384  
1385  
1386  
1387  
1388  
1389  
1389  
1390  
1391  
1392  
1393  
1394  
1395  
1396  
1397  
1398  
1399  
1399  
1400  
1401  
1402  
1403  
1404  
1405  
1406  
1407  
1408  
1409  
1409  
1410  
1411  
1412  
1413  
1414  
1415  
1416  
1417  
1418  
1419  
1419  
1420  
1421  
1422  
1423  
1424  
1425  
1426  
1427  
1428  
1429  
1429  
1430  
1431  
1432  
1433  
1434  
1435  
1436  
1437  
1438  
1439  
1439  
1440  
1441  
1442  
1443  
1444  
1445  
1446  
1447  
1448  
1449  
1449  
1450  
1451  
1452  
1453  
1454  
1455  
1456  
1457  
1458  
1459  
1459  
1460  
1461  
1462  
1463  
1464  
1465  
1466  
1467  
1468  
1469  
1469  
1470  
1471  
1472  
1473  
1474  
1475  
1476  
1477  
1478  
1479  
1479  
1480  
1481  
1482  
1483  
1484  
1485  
1486  
1487  
1488  
1489  
1489  
1490  
1491  
1492  
1493  
1494  
1495  
1496  
1497  
1498  
1499  
1499  
1500  
1501  
1502  
1503  
1504  
1505  
1506  
1507  
1508  
1509  
1509  
1510  
1511  
1512  
1513  
1514  
1515  
1516  
1517  
1518  
1519  
1519  
1520  
1521  
1522  
1523  
1524  
1525  
1526  
1527  
1528  
1529  
1529  
1530  
1531  
1532  
1533  
1534  
1535  
1536  
1537  
1538  
1539  
1539  
1540  
1541  
1542  
1543  
1544  
1545  
1546  
1547  
1548  
1549  
1549  
1550  
1551  
1552  
1553  
1554  
1555  
1556  
1557  
1558  
1559  
1559  
1560  
1561  
1562  
1563  
1564  
1565  
1566  
1567  
1568  
1569  
1569  
1570  
1571  
1572  
1573  
1574  
1575  
1576  
1577  
1578  
1579  
1579  
1580  
1581  
1582  
1583  
1584  
1585  
1586  
1587  
1588  
1589  
1589  
1590  
1591  
1592  
1593  
1594  
1595  
1596  
1597  
1598  
1599  
1599  
1600  
1601  
1602  
1603  
1604  
1605  
1606  
1607  
1608  
1609  
1609  
1610  
1611  
1612  
1613  
1614  
1615  
1616  
1617  
1618  
1619  
1619  
1620  
1621  
1622  
1623  
1624  
1625  
1626  
1627  
1628  
1629  
1629  
1630  
1631  
1632  
1633  
1634  
1635  
1636  
1637  
1638  
1639  
1639  
1640  
1641  
1642  
1643  
1644  
1645  
1646  
1647  
1648  
1649  
1649  
1650  
1651  
1652  
1653  
1654  
1655  
1656  
1657  
1658  
1659  
1659  
1660  
1661  
1662  
1663  
1664  
1665  
1666  
1667  
1668  
1669  
1669  
1670  
1671  
1672  
1673  
1674  
1675  
1676  
1677  
1678  
1679  
1679  
1680  
1681  
1682  
1683  
1684  
1685  
1686  
1687  
1688  
1689  
1689  
1690  
1691  
1692  
1693  
1694  
1695  
1696  
1697  
1698  
1699  
1699  
1700  
1701  
1702  
1703  
1704  
1705  
1706  
1707  
1708  
1709  
1709  
1710  
1711  
1712  
1713  
1714  
1715  
1716  
1717  
1718  
1719  
1719  
1720  
1721  
1722  
1723  
1724  
1725  
1726  
1727  
1728  
1729  
1729  
1730  
1731  
1732  
1733  
1734  
1735  
1736  
1737  
1738  
1739  
1739  
1740  
1741  
1742  
1743  
1744  
1745  
1746  
1747  
1748  
1749  
1749  
1750  
1751  
1752  
1753  
1754  
1755  
1756  
1757  
1758  
1759  
1759  
1760  
1761  
1762  
1763  
1764  
1765  
1766  
1767  
1768  
1769  
1769  
1770  
1771  
1772  
1773  
1774  
1775  
1776  
1777  
1778  
1779  
1779  
1780  
1781  
1782  
1783  
1784  
1785  
1786  
1787  
1788  
1789  
1789  
1790  
1791  
1792  
1793  
1794  
1795  
1796  
1797  
1798  
1799  
1799  
1800  
1801  
1802  
1803  
1804  
1805  
1806  
1807  
1808  
1809  
1809  
1810  
1811  
1812  
1813  
1814  
1815  
1816  
1817  
1818  
1819  
1819  
1820  
1821  
1822  
1823  
1824  
1825  
1826  
1827  
1828  
1829  
1829  
1830  
1831  
1832  
1833  
1834  
1835  
1836  
1837  
1838  
1839  
1839  
1840  
1841  
1842  
1843  
1844  
1845  
1846  
1847  
1848  
1849  
1849  
1850  
1851  
1852  
1853  
1854  
1855  
1856  
1857  
1858  
1859  
1859  
1860  
1861  
1862  
1863  
1864  
1865  
1866  
1867  
1868  
1869  
1869  
1870  
1871  
1872  
1873  
1874  
1875  
1876  
1877  
1878  
1879  
1879  
1880  
1881  
1882  
1883  
1884  
1885  
1886  
1887  
1888  
1889  
1889  
1890  
1891  
1892  
1893  
1894  
1895  
1896  
1897  
1898  
1899  
1899  
1900  
1901  
1902  
1903  
1904  
1905  
1906  
1907  
1908  
1909  
1909  
1910  
1911  
1912  
1913  
1914  
1915  
1916  
1917  
1918  
1919  
1919  
1920  
1921  
1922  
1923  
1924  
1925  
1926  
1927  
1928  
1929  
1929  
1930  
1931  
1932  
1933  
1934  
1935  
1936  
1937  
1938  
1939  
1939  
1940  
1941  
1942  
1943  
1944  
1945  
1946  
1947  
1948  
1949  
1949  
1950  
1951  
1952  
1953  
1954  
1955  
1956  
1957  
1958  
1959  
1959  
1960  
1961  
1962  
1963  
1964  
1965  
1966  
1967  
1968  
1969  
1969  
1970  
1971  
1972  
1973  
1974  
1975  
1976  
1977  
1978  
1979  
1979  
1980  
1981  
1982  
1983  
1984  
1985  
1986  
1987  
1988  
1989  
1989  
1990  
1991  
1992  
1993  
1994  
1995  
1996  
1997  
1998  
1999  
1999  
2000  
2001  
2002  
2003  
2004  
2005  
2006  
2007  
2008  
2009  
2009  
2010  
2011  
2012  
2013  
2014  
2015  
2016  
2017  
2018  
2019  
2019  
2020  
2021  
2022  
2023  
2024  
2025  
2026  
2027  
2028  
2029  
2029  
2030  
2031  
2032  
2033  
2034  
2035  
2036  
2037  
2038  
2039  
2039  
2040  
2041  
2042  
2043  
2044  
2045  
2046  
2047  
2048  
2049  
2049  
2050  
2051  
2052  
2053  
2054  
2055  
2056  
2057  
2058  
2059  
2059  
2060  
2061  
2062  
2063  
2064  
2065  
2066  
2067  
2068  
2069  
2069  
2070  
2071  
2072  
2073  
2074  
2075  
2076  
2077  
2078  
2079  
2079  
2080  
2081  
2082  
2083  
2084  
2085  
2086  
2087  
2088  
2089  
2089  
2090  
2091  
2092  
2093  
2094  
2095  
2096  
2097  
2098  
2099  
2099  
2100  
2101  
2102  
2103  
2104  
2105  
2106  
2107  
2108  
2109  
2109  
2110  
2111  
2112  
2113  
2114  
2115  
2116  
2117  
2118  
2119  
2119  
2120  
2121  
2122  
2123  
2124  
2125  
2126  
2127  
2128  
2129  
2129  
2130  
2131  
2132  
2133  
2134  
2135  
2136  
2137  
2138  
2139  
2139  
2140  
2141  
2142  
2143  
2144  
2145  
2146  
2147  
2148  
2149  
2149  
2150  
2151  
2152  
2153  
2154  
2155  
2156  
2157  
2158  
2159  
2159  
2160  
2161  
2162  
2163  
2164  
2165  
2166  
2167  
2168  
2169  
2169  
2170  
2171  
2172  
2173  
2174  
2175  
2176  
2177  
2178  
2179  
2179  
2180  
2181  
2182  
2183  
2184  
2185  
2186  
2187  
2188  
2189  
2189  
2190  
2191  
2192  
2193  
2194  
2195  
2196  
2197  
2198  
2199  
2199  
2200  
2201  
2202  
2203  
2204  
2205  
2206  
2207  
2208  
2209  
2209  
2210<br

21

**APPROVED FOR RELEASE: 06/19/2000**

CIA-RDP86-00513R000101810015-4"

21(7)

SOV/48-23-2-6/2o

AUTHORS: Anton'yeva, N. M., Dachilov, A. A., Dzhelepov, B. S.,  
Tif'lin, V. V., Preobrazhenskiy, B. K.

TITLE: Conversion Electrons of Eu<sup>149</sup> (Konversionnye elektrony Eu<sup>149</sup>)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1959,  
Vol 23, Nr 2, pp 204-205 (USSR)

ABSTRACT: In investigating the electron spectra of Eu and Gd fractions the authors determined some lines with equal energy among the conversion lines of both fractions. The energy difference of the K - L and K - M lines indicates that the corresponding nuclear transitions take place in the samarium nucleus. The respective energies amount to 256, 279 and 330 kev. From the half-life periods determined by the lines K-279 and K-330 the authors concluded that they had found a long-lived Eu isotope which decays to the samarium nucleus. According to a comparison with data published on Eu isotopes also

Eu<sup>149</sup> is considered to be responsible for the above-mentioned phenomenon. The authors concluded that the transitions with the energies 256-330 kev belong to the types E2 or M1, yet no definite conclusion can be drawn from the results obtained.

Card 1/2

Conversion Electrons of Eu<sup>149</sup>

30V/48-23-2-6/20

There are 2 figures, 2 tables and 3 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo  
gos. universiteta im. A. A. Zhdanova  
(Scientific Research Institute of Physics of Leningrad State  
University imeni A. A. Zhdanov)

Card 2/2

21(8)

N.

## AUTHORS:

Anton'yeva, G. M., Bashilov, A. A., S07/56-36-1-5/62  
Dzhelepov, B. S., Preobrazhenskiy, B. K.

## TITLE:

The Spectra of the Conversion Electrons of Gd<sup>146</sup> and Eu<sup>146</sup>  
(Spektry konversionnykh elektronov Gd<sup>146</sup> i Eu<sup>146</sup>)

## PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,  
Vol 36, Nr 1, pp 28-31 (USSR)

## ABSTRACT:

When investigating the conversion electron spectra of the neutron-deficient Gd-isotopes produced in the Th-fission by 660 Mev protons (Ref 1), the authors succeeded in finding an activity with the half-life 45 d (Ref 2). The investigations begun in these preliminary investigations are continued. Investigation of the conversion electron spectrum of the Gd fraction was carried out by means of the magnetic spectrometer "Ketron" of Leningradskiy gosudarstvennyy universitet (Leningrad State University), which has a resolving power of 0.5 %. The activity of 45 days is ascribed to Gd<sup>146</sup> by Murin et al (Ref 3). The results obtained by the authors' investigations are shown by figure 1 (the conversion electron spectrum of Gd<sup>146</sup>) and by the decay curve for Gd<sup>146</sup> (Fig 2).

Card 1/3

The Spectra of the Conversion Electrons of  
Gd<sup>146</sup> and Eu<sup>146</sup>

SOV/56-36-1-5/62

The following lines were found: K-114.8, K-115.5, L-114.8 + + 115.5 + K-155, M-114.8 + 115.5, L-155, and M-155 kev. On the strength of these results a decay scheme (Fig 3) is suggested for Gd<sup>146</sup> - Eu<sup>146</sup> - Sm<sup>146</sup>: The Gd<sup>146</sup> goes over into Eu<sup>146</sup> with a half-life of 45 days; the latter has three M1-transitions with E<sub>γ</sub> = 155, 115.5, and 114.8 kev, and goes over into Sm<sup>146</sup> with a half-life of 4.5 d. The latter with E<sub>γ</sub> = 630 and 742 kev passes from the state (2<sup>+</sup>) into the ground state. The results obtained by investigating the Eu<sup>146</sup> conversion electron spectrum are shown by figure 4. In conclusion, the authors thank the director of the Laboratoriya yadernykh problem OIYAI (Laboratory for Nuclear Problems of the United Institute for Nuclear Research) V. P. Dzhelepov and the synchrocyclotron personnel for irradiating the tantalum samples. There are 4 figures and 6 Soviet references.

Card 2/3

ANTON'Yeva, N. M.

21.5000, 24.6720, 24.6800,  
24.6810, 16.8100

76961  
SOV/56-37-6-1/55

AUTHORS: Anton'eva, N. M., Bashilov, A. A., Kulanskiy, E. K.

TITLE: Radioactive Decay of Ag<sup>110m</sup>

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki,  
1959, Vol 37, Nr 6, pp 1497-1505 (USSR)

ABSTRACT: A study was made of the photoelectron spectrum produced by the  $\gamma$ -rays of Ag<sup>110m</sup>. The magnetic spectrometer and the setup used were analogous to those described by B. S. Dzhelepov and A. A. Bashilov (cf. Izv. Akad. nauk SSSR. Ser. fiz., 14, 263, 1950). An analysis was also made of the  $\beta$ -ray spectrum up to 530 kev and of the spectrum of conversion electrons corresponding to nuclear transitions with energies of 116 kev and 656 kev. The internal conversion coefficients for 14 nuclear transitions in Cd<sup>110</sup> and and the multipolarity of the radiation were determined on the basis of the relative line intensities found in the present work and on the data given in a previous paper by the authors (cf. Doklady Akad. nauk

Card 1/7

## Radioactive Decay of Ag<sup>110m</sup>

76961  
SOV/56-37-6-1/55

SSSR, 77, 41, 1951). The spectrum of photoelectrons due to the  $\gamma$ -rays of  $\text{Ag}^{110m}$  (with Bi radiator,

$\sigma = 3 \text{ m}^2/\text{cm}^2$ ) was as shown in Fig. 2.

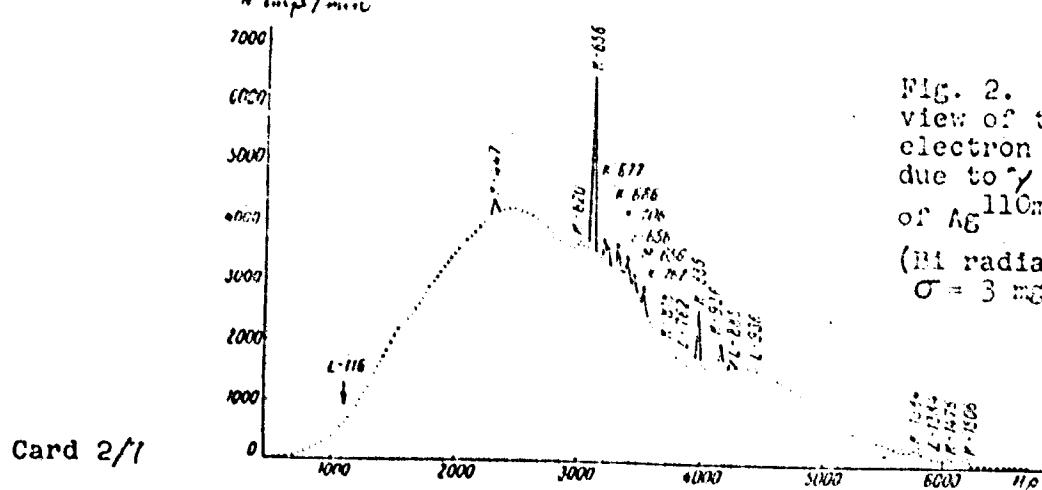


Fig. 2. General view of the photo-electron spectrum due to  $\gamma$ -rays of  $A_5^{110m}$  (Bi radiator  $\sigma = 3 \text{ m}_\Omega/\text{cm}^2$ )

Card 2/1

Radioactive Decay of Ag<sup>110m</sup>

76961  
SOV/56-37-6-1/b5

The relative intensities of the lines accorded well with the most reliable data from literature (cf. B. S. Dzhelepov, N. N. Zhukovskiy, Nucl. Phys., 6, 655, 1958). The  $\beta$ -spectrum of Ag<sup>110m</sup> for energies up to 600 kev (source  $\sigma \sim 10 \mu\text{g/cm}^2$ ) is shown in Fig. 6,

Card 3/7

Radioactive Decay of Ag<sup>110m</sup>

76961  
SOV/56-37-6-1/55

where, on the right and above is shown the Fermi graph for the soft component of the  $\beta$ -spectrum

$X = \sqrt{N \delta / E_F}$ ). The relative intensities and the form of lines accorded with the data of D. Strominger, J. Hollander, and G. Seaborg (cf. Rev. Mod. Phys., 30, 585, 1958). On the basis of these data the decay scheme of Ag<sup>110</sup> shown in Fig. 7 was proposed. The balance of energy in this scheme comprises + 3 kev. The ratio of conversion electrons for the transition at 656 kev to the number of  $\beta$ -particles was

$e_{K-656}/\beta = (2.5 \pm 0.3) \times 10^{-3}$ . If it is assumed that the number of nuclear transitions  $E_\gamma = 655$  kev is 0.93 per each decay (see the figure below), then the internal conversion coefficient is  $\alpha_{K-656} = (2.7 \pm 0.3) \times 10^{-3}$ . Within the limits of experimental error, this value accords with the theoretical value for the internal conversion coefficient for transitions of type E2. V. K. Adamchuk and M. A. Dolgoborodova participated in this work. There are

Card 5/7

Radioactive Decay of Ag<sup>110m</sup>

76961  
SOV/56-37-6-1/55

4 tables; 7 graphs; and 13 references, 5 Soviet,  
1 U.K., 7 U.S. D. Strominger, J. Hollander, G.  
Seaborg. Rev. Mod. Phys., 30, 585, 1958; L. Marino,  
W. Ewbank, W. Nierenberg, H. Shugart, H. Silsbee. Phys.  
Rev., 111, 286, 1958; E. O. Funk, M. L. Wiedenbeck.  
Phys. Rev., 112, 1247, 1958; H. W. Taylor, S. A. Scott.  
Phys. Rev., 114, 121, 1959; H. W. Taylor, W. R. Friskin.  
Phys. Rev., 114, 127, 1959, are the 5 most recent U. S.  
references.

ASSOCIATION: Leningrad State Univ., USSR (Leningradskiy gosudarstvennyy  
universitet, SSSR)

SUBMITTED: April 4, 1959

Card 7/7

ANTON'IEVA, N.M., DZHELEPOV, B.S.

Internal conversion coefficients of certain nuclear transitions in Yb 171. Izv. AN SSSR. Ser. fiz. 25 no.9:1088-1091 '61.  
(MIRA 14:8)

1. Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A.A. Zhdanova.  
(Ytterbium--Isotopes)  
(Internal conversion(Nuclear physics))

ANTON'YEVA, N.M.; BASHILOV, A.A. [deceased]; DZHELEPOV, B.S.; KAUN, K.O.  
MEYER, A.F.A.; SMIRNOV, V.B.

Radiation from Eu <sup>145</sup>, Eu <sup>146</sup> and Eu <sup>147</sup>. Zhur. eksp. i teor.  
fiz. 40 no.1:23-28 Ja '61.  
(MIRA 14:6)

1. Fizicheskiy institut Leningradskogo gosudarstvennogo  
universiteta.  
(Europium--Isotopes) (Isotope separation)

ANTON'YEVA, N. M.; NIKITIN, M. K.; SMIRNOV, V. B.

"Investigations of the Decay Scheme of Pd<sup>100</sup>."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22  
Feb 64.

NIFI LGU (Sci Res Inst Physics, Leningrad State Univ)

ANTON'YEVA, N. M.; NIKITIN, M. K.; SMIRNOV, V. B.

"Radiations of Rh<sup>100</sup>."

"Radiations of Pd<sup>101</sup>."

reports submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22  
Feb 64.

NIFI, LGU (Sci Res Inst Physics, Leningrad State Univ)

ACCESSION NR: AP4024458

S/0054/64/000/001/0053/0059

AUTHORS: Anton'yeva, N. M.; Katy'khin, G. S.

TITLE: Sb<sup>125</sup> radiationSOURCE: Leningrad. Universitet. Vostnik. Seriya fiziki i khimii, no. 1, 1964,  
53-59TOPIC TAGS: conversion electron, magnetic spectrometer, magnetic spectrograph,  
neutron irradiation, multiple order transition, beta spectrum

ABSTRACT: The  $\beta$ -spectrum and the spectrum of conversion electrons of Sb<sup>125</sup> have been studied with the help of a magnetic spectrometer type "Ketron" (B. S. Dzhelepov and A. A. Bashilov. Izv. AN SSSR, ser. fiz. 14, 263, 1950) with 0.5% resolving power and a magnetic spectrograph with 0.19% resolution. Investigation was conducted on a single source specimen, chemically separated and neutron irradiated. Among the various Sb<sup>125</sup> measurements conducted were: the  $\beta$ -spectrum, K and L conversion spectra,  $\gamma$ -radiation energy, multipole order transitions, and the Sb<sup>125</sup>-Te<sup>125</sup> decay process where more precise data were obtained than hitherto possible for the energy of 145, 321.3 and 463.1 kev levels. "The authors are grateful to V. I. Perrimond, A. A. Zhdanov, N. Stegalkina, L. Kolmykova and

Card 1/2

ACCESSION NR: AP4024458

Yu. Golubev for their assistance." Orig. art. has: 5 figures, 4 tables, and 1 formula.

ASSOCIATION: none

SUBMITTED: 15Nov62

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: PH

NO REF Sov: 006

OTHER: 008

Card 2/2

ACCESSION NR: AP4031164

S/0056/64/046/004/1490/1492

AUTHOR: Anton'yeva, N. M.; Nikitin, M. K.; Smirnov, V. B.

TITLE: Emission of Pd<sup>100</sup>

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1490-1492

TOPIC TAGS: palladium-100, palladium-100 emission, palladium-100  $\gamma$  spectrum, palladium-100 decay scheme, conversion electron spectrum,  $\gamma\gamma$  coincidences, transition energies

ABSTRACT: The emission of radioactive Pd<sup>100</sup> was investigated with a "katron" type magnetic spectrometer, scintillation  $\gamma$  spectrometers, and a total-absorption  $\gamma$  spectrometer. To interpret the observed activity, the accumulation and decay of the 238 keV line belonging to the daughter isotope of Pd<sup>100</sup>(Ra<sup>100</sup>) was measured and the analysis of the curve leads to the conclusion that the activity observed, with a half life 3.7 + 0.3 days, should be ascribed to Pd<sup>100</sup>. The intensities of all the observed  $\gamma$  lines agrees with this half line. The sum lines with energies 158, 126, and 64 keV agree with the data of Pd<sup>100</sup>  $\gamma\gamma$  coincidences. The results were used to compile a level scheme for the decay of Pd<sup>100</sup>, containing all the observed  $\gamma$  transitions, except the one with ~52 keV energy. The high K/L ratios for

Card 1/4

ACCESSION NR: AP4031184

the most intense  $\gamma$  transitions (74.4 and 83.8 keV) show that these can be of the M1 or E1 type.

ASSOCIATION: Fizicheskiy institut Leningradskogo gosudarstvennogo universiteta  
(Physics Institute of the Leningrad State University)

SUBMITTED: 26Oct63

DATE ACQ: 07May64

ENCL: [02]

SUB CODE: NP

NR REF Sov: 000

OTHER: 001

Card

2/4

ACCESSION NR: AP4030184

ENCLOSURE 01

Transition energies, energy difference K - L and K - M, relative intensities of conversion lines and of gamma transitions, and gamma-gamma coincidence results.

№ нр.	hv, keV	J/J <sub>γ4Kv</sub> относитель- ная интен- сивность	K-L, keV	K-M, keV	J/KINT	K/L	J <sub>γ</sub> /J <sub>γ4Kv</sub>	У-переходы, совпадающие с данной hv, keV
1	32.4±0.3	K, L, M	—	—	—	—	1.8±0.5	—
2	41.9±0.3	K	—	—	—	—	1.8±0.5	—
3	51.7±0.3	K	—	—	—	—	—	—
4	74.4±0.4	K, L, M	20.0±0.3	21.9±0.3	83±3	0.4±0.3	45	24
5	83.8±0.4	K, L, M	19.9±0.3	22.6±0.2	100	0.0±0.0	100	22, 42, 74
6	120.8±0.6	K, L	39.6±0.3	—	1.0±0.3	—	10	22
7	130.1±0.6	K, L	—	—	—	—	1.3	—

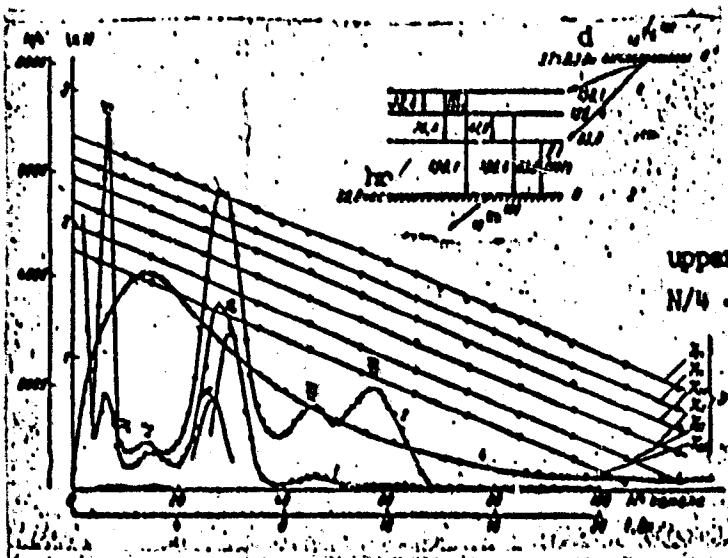
Card 3/6

- 1 - observed lines  
 2 -  $\gamma$  transitions coinciding  
 with a given hv

The relative intensities  
 $J/J_{\gamma 4Kv}$  are accurate to  
 within 20%

ACCESSION NR. AP4021184

ENCLOSURE: 02



- 1 - gamma spectrum of Pd<sup>100</sup>,
- 2 - gamma spectrum of total absorption of gamma radiation of Pd<sup>100</sup>,
- 3 - decrease in gamma line intensity with half-life  $3.7 \pm 0.3$  days
- 4 - accumulation and decay of 2380 keV gamma line intensity in Rh<sup>100</sup>,

upper right - proposed Pd<sup>100</sup> decay scheme  
N/4 - number of counts in 4 minutes.

channel no.  
days

SEARCHED INDEXED SERIALIZED FILED

TYPE: Investigation of the Chernobyl accident

SUBJECT: Radium-226

TOPIC TAGS: plutonium, radioactive iodine, magnetic spectrometry  
gamma transition gamma spectra gamma decay gamma radiation

44-2 473

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

ACCESSION NR: AFI-101

Card 2/3

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

CONFIDENTIAL 3/3

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

L 16930-45 DTIC<sup>1</sup> IV F  
ACCESSION NR: AP5004190

3/0020/65/1617001705270060

AUTHORS: Anton'yeva, N. M.; Dzhelebov, B. S. (Corresponding member  
AN SSSR); Nikitin, M. K.; Smirnov, V. P.

TITLE: Investigation of the decay of Pd-101, Rh-101\*, and Rh-101.

SOURCE: AN SSSR, Doklady, v. 160, no. 1, 1965, 57-60

TOPIC TAGS: palladium, rhodium, decay scheme, gamma transition

ABSTRACT: The decay of Pd<sup>101</sup>, Rh<sup>101\*</sup> and Rh<sup>101</sup> in accordance with  
the scheme



Cord

i/2

L 26932-65  
ACCESSION NR: AP5004190

was investigated with the aid of a magnetic spectrometer of the "ketron" type (resolution 0.5%) with the electrons registered with the aid of an intrinsic gamma spectrometer, single source (for the study of gamma-gamma coincidences), and "total absorption" spectrometer with a 70 x 70 mm NaI crystal in a barrel. The target preparation methods and the precautions taken to exclude background are described. The gamma transitions observed in the various systems are outlined, and the relative intensities are given. The conclusions are presented, with all basic figures and tables.

ASSOCIATION: Leningradskiy gosudarstvenny universitet im. A. A. Zhdanova (Leningrad State University)

SUBMITTED: 26Sep64

ENCL: 00

SUB CODE: NP

NR REF Sov: 002

OTHER: 004

Conf 2/2

1. ANTCHYUK, A. A.

2. USSR (600)

4. Greenhouses

7. Work practice of the factory's "green shop." Sad i og. no. 9, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

1. ANTONYUK, A. A.
2. USSR (600)
4. Waste Heat
7. Using industry's waste heat in vegetable gardening. Dost. sel'khoz . no. 10, 1952.
  
9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

ANTONYUK, A.

Battelle Technical Review  
July 1954  
Agriculture

(1)

142° Application of Industrial Heat Wastes to Suburban  
Hot House and Truck Farming. (Russian.) A. Antonuk.  
Sotsialisticheskoe Sel'skoe Khozstvo, v. 24, no. 10, Oct. 1953,  
p. 44-50.  
Economic feasibility of using heat of power stations, factories,  
and plants for heating seed beds. Table.

**ANTONYUK, A., starshiy nauchnyy sotrudnik**

New designs of hotbeds with heating systems. Sel'sstroj. 9  
no.4:14-15 Jl '54. (MIRA 13:2)

1. Nauchno-issledovatel'skiy institut ovoshchnogo khozyaystva.  
(Hotbeds)

ANTONYUK, A.Y.

Coal counter. Gidreliz. i lesokhim.prem. 8 no.7:22 '55. (MLRA 9:4)

1. Nachal'nik masterskoy KIL Stalingradskogo gidrelisnogo zavoda.  
(Counting devices) (Coal-handling machinery)

ANTONYUK, A.Y.

Meter for registering the water fed to the digester. Gidroliz. i  
lesokhim.prom. 9 no.1:25 '56.  
(MLRA 9:6)

1.Nachal'nik mestorskoy kontrol'no-izmeritel'nykh priborov Sta-  
lingradskogo gidrolysnogo zavoda.  
(Water meters)

ANTONYUK, B.N.; DENESYUK, I.P.; KUROV, Yu.P.; VAYNCHTEYN, A.I.; BERDNIKOV, V.A.; VEITSMAN, M.B.; IVANOV, A.A.; IVANOV, A.S.; GAYEVSKIY, B.L.; KOZEL'TSEV, L.K.; KOZEL'TSEV, L.I.; KIVAILIDIN, S.G.; MIROSHIN, A.I.; MIJIKOV, G.Ye.; ZUBKOVSKIY, B.P.; IZYUMOV, B.N.; EDEL'SHTEYN, V.I.; KOCHETKOV, V.P.; BUBLIKOV, A.V.; DZHANASHIYA, V.A.

Patents. Bum. i der. prom. no.1:53-54 Ja-Mr 165.

(MIRA 18:10)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

ANTONYUK, B.N.

Double-saw Ts2K-180 trimmer. Bum.i der.prom. no.4220 O-D '62.  
(MIRA 15:12)  
(Woodworking machinery)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

POLOV'YAN, A.V.; PAVLOTSKIY, A.Ya.; ANTONYUK, B.N.

Automatic line for processing furniture panels. Bum. i der. prom.  
no.3:3-6 J1-S '63. (MIRA 17:2)

RUTMAN, G.A.; ANTONYUK, B.N.

Multipurpose machine for processing sides and partitions of ward-  
robes. Bum. i der. prom. no. 3140-43 J1-S '63. (MIRA 17;2)

1. Zhitomirskiy mebel'nyy kombinat.

~~ANTONYUK, F.T.~~; MARINOV, A.I.

Producing high-grade molten steel for automobile sheet metal.  
Metallurg no.1:24-27 Ja '56.  
(MIRA 9:9)

1. Starshiy master martenovskogo tschka (for Antonyuk). 2. Rukovoditel' martenovskoy gruppy TzL (for Marinov).  
(Steel, Automobile)

AUTHOR  
TITLE

ANTONYUK, G.K.

2C-1-1/64

Significance of Surfaces for Functions Regular in a Ring.  
(Pokrytiye ploshchadey dlya funktsiy, reguljarnykh v kol'tse -  
Russian)

PERIODICAL  
ABSTRACT

Doklady Akademii Nauk, 1957, Vol 114, Nr 1, pp 9-10, (U.S.S.R.)

If the function  $w = f(z)$  is regular in the ring  $1 < |z| < R$ , and if we have  $(1/2\pi i) \int (f'(z)/f(z)) dz \geq 1$ , then  $w = f(z) \in \mathbb{M}$ . In this context, L denotes a contour not homologous to R. Reference is made to some relevant previously published papers and some of their shortcomings are indicated. In the paper under review, its author employs a somewhat different definition of a 'star' than G.Ya.Khazhaliya.

(1) Let R and  $R_{\tau_1, \sigma_1}$  denote Riemann's surfaces on which the rings  $1 < |z| < R$  and  $1 + \tau < |z| < R - \sigma$ ;  $\tau, \sigma$  are projected by the function  $w = f(z) \in \mathbb{M}$ . Let furthermore two arbitrary sequences of numbers and one arbitrary system of rays (coming out of the point  $w=0$ ) be given. (2) The Riemann's surface  $R_{\tau_1, \sigma_1}$  is then split up into all of its sheets; details are listed in the paper under review. The rays mentioned in this context split up each of the Riemann's surfaces  $R_{\tau_2, \sigma_2}, R_{\tau_3, \sigma_3}$  into a certain entirety of parts. (3) On the Riemann's surface  $R_{\tau_2, \sigma_2}, 1 < q < s, 1 \leq j \leq k_q$  the following observation is made: (a) All ramification points  $R_{q,j}^{\tau_2, \sigma_2}$ , the projection of which on the surface w lies outside of the projection  $R_{\tau_1, \sigma_1}^{q,j}$ . (b) All those points of the

Card 1/2

Significance of Surface for Functions Regular in a Ring. #C-1-1/17

boundary of the Riemann's surface  $R_{\tau_2, \sigma_2}^{q,j}$  which have a projection on the surface  $w$  outside of the projection  $R_{\tau_1, \sigma_1}^{q,j}$ . The paper under review discusses the further steps of the splitting-up of the Riemann's surface. In concluding, the author of the paper offers the following definition: In the paper under review, a star  $R^*$  of the Riemann's surface  $R$  in respect to the system  $L_k, k = 1, 2, \dots, m$  of the rays emanating from the point  $w = 0$  denotes an open multitude that lies on the Riemann's surface  $R$  and forms the boundary value for a certain sequence  $V_n(j_1, j_2, \dots, j_s)$  at  $n \rightarrow \infty$ .

(No reproduction).

ASSOCIATION Not Given.  
PRESENTED BY SMIRNOV V.I., Academy Member,  
SUBMITTED 20.11.1956  
AVAILABLE Library of Congress.  
Card 2/2

ANTONYUK, G. K.: Master Phys-Math Sci (diss) -- "Some theorems on functions  
which are regular in a ring". Leningrad, 1958. 5 pp (Leningrad Order of Lenin  
State U im A. A. Zhdanov, Math-Mech Faculty), 150 copies (KL, No 8, 1959, 134)

AUTHOR: ANTONYUK, G.K.

43-1-4/10

TITLE: On the Covering of Surfaces for Functions Regular in a Ring (O pokrytii ploshchadey dlya funktsiy, reguljarnykh v pol'tse)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya Matematiki, Mekhaniki i Astronomii, 1958, Nr 1 (1), pp.45-65 (USSR)

ABSTRACT: The present paper is essentially devoted to a generalizing correction of an investigation of Khazhaliya [Ref.3]. In due time Goodman (Math. Rev., Vol.14, Nr 6, p.549) called attention to the short-coming of khazhaliya's definitions and argumentations. The author uses another definition of the star of the Riemannian surface and obtains about the following result: The regular function  $w = f(z)$  of a certain class  $M$  is assumed to map the ring  $1 < |z| < R$  onto the Riemannian surface  $\tilde{R}$ . The author proves the existence of the star of  $R$  defined by him and obtains the inequality

$$\left(1 + \frac{S}{\pi}\right) \left(1 + \frac{s}{\pi}\right) \geq \pi^4 ,$$

where  $S$  is the surface area of the star and  $s$  the surface area of the original range. The equality sign only holds for  $f(z) = \epsilon z$ ,  $|\epsilon| = 1$ . 6 figures, 6 Soviet and

Card 1/2

On the Covering of Surfaces for Functions Regular in a Ring 13-1-4/10

1 foreign references are quoted.

SUBMITTED: 27 June 1957

AVAILABLE: Library of Congress

1. Surfaces 2. Function 3. Conformal mapping

Card 2/2

16(1)

AUTHOR: Antonyuk, G.K. SOV/43-59-13-8/16

TITLE: On the Extension to Non-Schlicht Functions of Some Extremal Properties of Functions Schlicht in the Annulus

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 13 (3), pp 71-82 (USSR)

ABSTRACT: The author gives a function class consisting not only of schlicht functions, for which the extremal properties of certain functions schlicht in  $|z|<1$ , investigated by Grötzsch [Ref 1], remain true. A great part of the paper consists in a repetition of the results of Grötzsch. The author mentions Gyunter and Kuz'min. There are 7 figures, and 2 references, 1 of which is Soviet, and 1 German.

SUBMITTED: December 28, 1957

Card 1/1

ANTONIUK, I. D.

Lunintsev STSB. The followers of Lunin movement in signaling, centralization and block system. Monks, Gos. transp. zhele-zor. izd-vn. 1941. 19 v.

DLC: TM615.A7

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS. A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified.

~~ANTONYUK, I. N.~~ inshener; ORLOV, V.G.; SAMSONOV, A.V.; TSARENKO, A.P.,  
redaktor; KHITROV, P.A., tekhnicheskij redaktor

[Station master's manual] Posobie nachal'niku stantsii. Moskva,  
Gos.transp.shel-dor. izd-vo, 1957. 406 p. (MLRA 10:9)  
(Railroads--Stations)

~~ANTONYUK, I.D., insh.~~

~~BUNIN, D.A., insh.~~

~~Central control of switches and signaling on the railroads of the  
U.S.S.R. Avtom. i svias' no.11:5-8 N '57. (MLRA 10:11)  
(Railroads--Signaling)~~

ANTONYUK, I.D., insh.

Testing the wiring insulation of signaling, central control, and  
block systems. Avtom. telem. i aviar' 2 no.12:36-38 D '58.  
(MIRA 11:12)  
(Electric insulators and insulation--Testing)

ANTONYUK, I.D., insh.

Installation and maintenance of automatic barriers for railroad crossings. Put' i put. khz. no. 4:41-42 Ap '58. (MIRA 11:4)  
(Railroads--Safety appliances)  
(Railroads--Crossings)

ANTONYUK, I.D., Insh.

Electrically centralized switches and their maintenance. Put' i  
out, khos. no. 7142-43 J1 '58. (MIRA 11:?)  
(Railroads--Switches)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

ANTONYUK, I.D., insh.

Changes made in the directive on signaling. Elek. i tepl.  
tiaga 3 no.4:39-41 Ap '59. (MIRA 12:7)  
(Railroads--Signaling)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

ANTONYUK, I.D., insh.

Positions of the route indicator. Elek. i tepl. tiazena 3  
no. 7:43 J1 '59. (MIRA 13:3)  
(Railroads--Signaling)

ANTONYUK, I.D.

After finishing work, one should check the performance of  
the equipment. Avtom., telem.i sviaz 3 no.9:40-41  
S '59. (MIRA 13:2)  
(Railroads--Signaling)

KOLYADA, G.I., insh.; ANTONYUK, I.D., insh.

New rules ensuring safety for traffic. Avtom., telec. i aviaz'  
3 no.12:3-5 D '59. (MIRA 13:4)  
(Railroads—Traffic)

ANTONIUK, Igor' Danilovich; OHLOV, Viktor Grigor'yevich; SAMSONOV,  
Aleksay Vasil'yevich; TSARENKO, A., red.; KHITROV, P.A.,  
tekhn.red.

[Manual for the stationmaster] Posobie nachal'niku stantsii.  
Izd.2., perer. i dop. Moskva, Vses.izdatel'sko-poligr. ob"edi-  
nenie M-va putei soobshcheniya, 1960. 398 p. (MIRA 13:6)  
(Railroads--Station service)

ANTONYUK, I.D., inzh.

More about the article "Is it necessary to keep a journal of  
discharged work?" Avtom., telem. i sviaz' 7 no.5:38-39 My '63.  
(MIRA 16:7)  
(Railroads—Electric equipment)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

ANTONYUK, I.D., inzh.

These regulations should be reviewed. Avtom., telem. i sviaz'  
7 no.7:19-21 Jl '63. (MKA 16:10)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

GUMBURG, D.M.; ANTONYUK, I.D., Inzh.

Pedal or track circuit? Avtom., telem. i sviaz' 9 no.6:40-41 Je  
'65. (MIRA 18:8)

1. Nachal'nik otdela signalizatsii, tsentralizatsii i blokirovki  
sluzhby signalizatsii i svyazi Severnyy dorogi (for Gamburg).

LITVINENKO, A.P., dotsent; ANTONYUK, I.G.; KABARDIN, N.Ye.; TOLSTOPYATOV,  
E.A.

Methodology of internal compressing metallo-osteosynthesis with  
osteoplasty. Ortop., travm. i protez. 25 no.1:34-38 Ja '64.  
(MIRA 17:9)

1. Iz Ukrainskogo instituta ortopedii i travmatologii (dir. - dotsent  
I.P.Alekseyenko, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR  
prof. F.R.Bogdanov). Adres avtorov: Kiyev, ul. Vorovskogo, 27,  
Institut ortopedii i travmatologii.

BOGDANOV, F.R., prof. (Kiyev 25, Vladimirskaia ul.d.9, kv.10); ANTONYUK, I.G.

Surgical treatment of patients with complicated pseudarthrosis and  
defects of the tibia. Ortop., travm. i protez. 26 no.3:9-14 Mr '65.  
(MIRA 18:7)

1. Iz Ukrainskogo instituta ortopedii i travmatologii v Kiyev'e (dir.-  
dotsent I.P.Alekseyenko). 2. Chlen-korrespondent AMN CCR (for  
Bogdanov).

ANTONYUK, K., inzh.; TITOV, A., inzh.

New design for the walls of biofilters in purification structures.  
Sel'. stroi. 16 no.12:17-18 D '61. (MIRA 15:2)  
(Sewage--Purification)

IVCHINKO, Sergey Ivanovich; ANTCNYUK, L., red.

[Riddles of cinchona; stories about trees] Zagadki  
tsinkhony; rasskazy o derev'jakh. Moskva, Molodaia gvardiya,  
1965. 206 p. (MIRA 18:5)

ABABASHEV, Igor' Ivanovich; MISTANIYEV, M., red.; ANTONYUK, L., red.;  
SHLENSKAYA, N., tekhn.red.

[Man improves the planet] Chelovek ispravlinet planetu.  
Moskva, Izd-vo TSK VLSM "Molodaia gvardiia," 1959. 190 p.  
(MIRA 12:12)  
(Civil engineering)

DOBROLYUBSKIY, Oleg Konstantinovich, kand. khim. nauk; ANTONYUK, L.,  
red.; MIKHAYLOVSKAYA, N., tekhn. red.

[Wonderful milligrams] Chudesnye milligrammy. Moskva, Izd-vo  
"Molodaia gvardiia," 1962. 142 p. (MIRA 16:3)  
(Trace elements)

SAPARINA, Yelena Viktorovna; ANTONYUK, L., red.; KUVYRKova, L., tekhn.  
red.

[Cybernetics inside of us] Kibernetika vnutri nas. Moskva, Izd-  
vo "Molodnia gvardiiia," 1962. 302 p. (MIRA 16:3)  
(Cybernetics)

BILENKO, Dmitriy Aleksandrovich; ANTONYUK, L., red.; VOLYNTSEVA, V..  
tekhn.red.

[Gifts from two sciences] Dary dvukh nauk. Moskva, Izd-vo  
TzK Vsesm "Molodaya gvardiya," 1960. 38 p. (MIRA 13:5)  
(Electricity)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

AZERNIKOV, Valentin Zakharovich; ANTONYUK, L., red.; KOVALEV, A., tekhn.  
red.

[From matches to rocket fuel] Ot spichki - k raketnomu toplivu.  
Moskva, Izd-vo TsK VLKSM "Molodaia gvardiia," 1961. 142 p.  
(MIRA 14:8)

(Rockets(Aeronautics))—Fuel)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

BLOK, Georgiy Ernestovich; ANTONYUK, L., red.; KOVALEV, A., tekhn. red.  
[Trails of science; journey to our near future] Puti nauki; sov-  
sem riadom s priadushchim. Moskva, Izd-vo TSK VLKSM "Molodaiia  
gvardiia," 1981. 302 p. (MIRA 14:10)  
(Science) (Technology)

ADAEASHEV, Igor' Ivanovich; ANTONYUK, L., red.; SHLENSKAYA, M.,  
tekhn. red.

[Man improves the planet] Chelovek ispravliaet planetu.  
Izd.2., dop. Moskva, Molodaia gvardiia, 1964. 238 p.  
(MIRA 17:3)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4

BOROV, Lev Viktorovich; ANTONYUK, L., red.

[Through the eyes of Monge-Bertollet] Glazek i Mnogob-  
Bertolle. Moskva, Molodaya gvardiya, 1964. 318 p.  
(MIRA 16:3)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000101810015-4"

PLATONOV, Konstantin Konstantinovich; ANTONYUK, L., rod.

[Entertaining psychology] Zanimatel'naia psikhologija.  
Izd.2., dop. Moskva, Molodaia gvardiia, 1964. 380 p.  
(MIRA 17:12)

LISOGOROV, Novgorod Vasil'yevich; ANDREYEV, Ilya Petrovich.

[When the fantastic retreats] Kogca ostopaet fantastika.  
Moskva, Molodaja gvardija, 1964. 189 p. (MIRA 18:1)

ADABASHEV, Igor' Ivanovich; ANTONYUK, L., red.; SAMARSKAYA, N., red.;  
KOVALEV, A., tekhn. red.

[Reason against the elements] Razum protiv stikhii. Moskva,  
Izd-vo Tsk VLKSM "Molodnia gvardiia," 1962. 270 p.

(MIRA 15:3)

(Disasters)

KHALIFMAN, Isail Aronovich; ANTONYUK, L., red.; YEGOROVA, I.,  
tekhn. red.

[Bees] Pchely. Izd.4., perer. i dop. Moskva, Molodaia  
gvardiia, 1963. 397 p. (MIRA 16:4)  
(Bees)

POPOVSKIY, Mark Aleksandrovich; ANTONYUK, L., red.; KIRILLINA, A.,  
tekhn. red.

[The second creation of the world] Vtoroe sotvorenie mira.  
Moskva, Molodaia gvardiia, 1960. 222 p. (MIRA 16:6)  
(Plant breeding)

KHALIFMAN, Iosif Aronovich; ANTONYUK, L., red.; YEGOROVA, I.,  
tekhn. red.

[Ants] Murav'i. Moskva, Molodaia gvardiia, 1963. 302 p.  
(MIRA 16:12)

(Ants)

GOLUBEV, Oleb Nikolayevich; ANTON'UK, L., red.

[Unsolved mysteries] Nerangerdannye tainy. Izd.2., dop.  
Moskva, Molodaya gvardiya, 1965. 268 p. (MIRA 18;3)

ANTONYUK, M.R.

Trapanation of the frontal sinus in a diagnosis and therapy  
[with summary in English]. Vest.oto-rin. 20 no.6:67-74 N-D '58  
(MIRA 11:12)  
1. In Oto-rino-laringologicheskogo otdeleniya Moskovskoy  
gorodskoy klinicheskoy bol'nitay No. imeni N.I. Pirogova.  
(FRONTAL SINUS, dis.  
trepanation in diag. & ther. (Rus))

ANTONYUK, N.Ye., kand.med.nauk

Ballistocardiography in coronary insufficiency. Nauch.trudy  
L'vov.obl.terap.ob-shva no.1:113-119 '61. (MIRA 16:5)

1. Kafedra fakul'tetskoy terapii pediatriceskogo i sanitarno-  
gigienicheskogo fakul'tetov L'vovskogo meditsinskogo instituta  
(zav. kafedroy - dott.sit S.M. Martynov).  
(BALLISTOCARDIOGRAPHY) (CORONARY HEART DISEASE)